

**City of Saint Paul**  
**Civil Engineer – SPRWS Job Family Competency Matrix**  
Each competency builds upon the other as the class series progresses.

**Effective Date: March 16, 2009**

<b>Classification Titles</b>	<b>Civil Engineer I – SPRWS</b> Occupation Code: 402B BU: 06 Grade: 011 <a href="#">Salary Info</a>	<b>Civil Engineer II – SPRWS</b> Occupation Code: 403B BU: 06 Grade: 015 <a href="#">Salary Info</a>	<b>Civil Engineer III – SPRWS</b> Occupation Code: 404B BU: 06 Grade: 020 <a href="#">Salary Info</a>	<b>Civil Engineer IV – SPRWS</b> Occupation Code: 405B BU: 09 Grade: 025 <a href="#">Salary Info</a>
<b>General Duty Statement</b>	<p>Performs entry-level professional engineering in the investigation, design, inspection, operation, construction or maintenance of Saint Paul Regional Water Services (SPRWS) projects.</p> <p>Assists with research work, contract administration, and preparation of reports and maintenance records. Performs related work as assigned.</p>	<p>Performs intermediate-level professional engineering in the investigation, design, inspection, operation, construction or maintenance of Saint Paul Regional Water Services (SPRWS) projects. Prepares contracts and reports. Performs related work as assigned.</p>	<p>Performs full-performance professional engineering in the design, plans, specifications, operation, construction and cost estimates of Saint Paul Regional Water Services (SPRWS) projects.</p> <p>Participates with higher-level engineers in the planning of water utility improvements. Acts as a chief inspector on large and complex projects. Prepares and administers contracts and reports. Gathers required information for budget development. Represents the department at public meetings. Performs related work as assigned.</p>	<p>Performs expert-level professional engineering on Saint Paul Regional Water Services (SPRWS) projects. Acts as an assistant to a major division head in SPRWS. Serves as a technical consultant to the Chief Engineer on complex engineering projects. Projects future engineering needs of the water utility and conducts long-range planning. Oversees the preparation of designs, plans, specifications, and cost estimates. Develops and implements budgets. Represents the department at meetings with the public and elected officials. Performs related work as assigned.</p>
<b>Supervision Received</b>	Works under the technical supervision of a unit supervisor.	Works under the technical, general, and/or administrative supervision of a unit or division manager.	Works under the general supervision of a unit, division, or department director.	Works under the general supervision of a unit, division or department director.
<b>Supervision Exercised</b>	May exercise technical supervision over lower-level support, technical, or professional staff.	Exercises technical supervision over lower-level support, technical, or professional staff.	Exercises technical, general, and/or administrative supervision over assigned staff.	Exercises general and/or technical supervision through lower-level supervisors, professional, technical, and administrative support employees.

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<b>Technical Expertise, Technology Used, and Work Methods</b>	<p>Demonstrates a basic understanding of the common principles, terms, procedures, and practices of civil engineering. Demonstrates an understanding and ability to perform intermediate engineering calculations using algebra, geometry, and trigonometry to solve problems associated with the work.</p> <p>Demonstrates an ability to identify the common risks and liability implications involved in SPRWS maintenance activities.</p> <p>Demonstrates a basic understanding of job-required computer systems and software applications, the internet, department-specific software, and an ability to utilize this knowledge in completing daily assignments.</p> <p>Demonstrates a basic understanding contract law, contract relationship, legally binding and sales agreements and other related legal documents.</p> <p>Demonstrates an ability to interpret engineering plans and specifications.</p>	<p>Demonstrates an intermediate-level understanding of the common principles, terms, procedures, and practices of civil engineering. Demonstrates an understanding of soil properties, structural mechanics, behavior of materials, surveying, drainage and flow characteristics, engineering and mechanical equipment, mathematics and related engineering formulas and other common technical terms, procedures and principles of engineering practice. Demonstrates the ability to identify and resolve problems associated with the work.</p> <p>Demonstrates an intermediate-level ability to identify the common risks and liability implications involved in SPRWS maintenance.</p> <p>Demonstrates an intermediate-level of understanding of job-required computer systems and software applications, the internet, department-specific software, and an ability to utilize this knowledge in completing daily assignments.</p> <p>Demonstrates an advanced ability to prepare contracts including assembling information, following through with the bidding process, meeting with contractors, and administering contracts. Demonstrates an ability to apply expertise in minimizing associated risks and liabilities and refer legal issues to a supervisor.</p>	<p>Demonstrates an advanced understanding of the full range of principles, terms, laws, rules, regulations, procedures, and practices of civil engineering. Demonstrates an advanced understanding of fluid mechanics, soil properties, structural mechanics, behavior of materials, surveying practices, drainage and flow characteristics, engineering and mechanical equipment, mathematics and related engineering formulas, and other technical engineering principles.</p> <p>Demonstrates an advanced understanding of water supply, treatment, and distribution systems. Demonstrates an ability to apply new methods and technologies, and resolve a full range of problems associated with the work.</p> <p>Demonstrates an advanced ability to identify and minimize the full range of risks and liability implications involved in SPRWS maintenance and refer legal issues to a supervisor.</p> <p>Demonstrates an advanced understanding of job-required computer systems and software applications, the internet, department-specific software, and an ability to apply technological advances to complex work applications.</p>	<p>Demonstrates an expert understanding of the organizational structure of the SPRWS and the City, and an understanding of the full range of principles, terms, procedures, and practices of water utility civil engineering. Demonstrates the ability to identify and resolve the most difficult and complex problems associated with the work.</p> <p>Demonstrates an expert understanding of water supply, facility design, purification, treatment, storage, and distribution. Demonstrates an ability to resolve a full range of problems associated with the work.</p> <p>Demonstrates on a divisional basis an expert ability to identify and minimize the full range of risks and liability implications involved in SSPWS maintenance activities and refer legal issues to a supervisor or the City Attorney’s Office, if necessary.</p> <p>Demonstrates on a divisional basis an ability to evaluate technological needs and select appropriate technological tools, applications, and advances in work methods to meet those needs. Demonstrates an ability to manage and lead staff involved in applying the tools.</p>

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<b>Project and Program Management, Prioritization, Planning, and Finances</b>	<p>Demonstrates an ability to lead an engineering crew of technicians in making surveys for preliminary engineering data, design estimates, construction projects, and property surveys.</p> <p>Demonstrates an ability to assist in the preparation of plans, designs, specifications, and estimates of engineering projects.</p> <p>Demonstrates an ability to assist with inspection of Water Utility construction projects, and observe and check workmanship during the progress of such work.</p> <p>Demonstrates an ability to plan, organize, and prioritize own work, meet deadlines, and adhere to assigned work schedule and hours assigned. Demonstrates an ability to be flexible and adaptable to changes in work assignments.</p>	<p>Demonstrates an ability to plan and manage major portions of SPRWS projects or programs including research, design, contract administration, preparation of plans, specifications, studies and reports and the inspection, approval, and evaluation.</p> <p>Demonstrates an ability to define and measure results, prioritize work, and meet deadlines for own work.</p> <p>Demonstrates an ability to plan and coordinate the work of lower-level engineers in the preparation of detailed plans, designs, specifications, and cost estimates of water utility projects.</p> <p>Demonstrates an advanced ability to assist with the planning, coordination, and monitoring of work on basic design or construction projects or programs. Demonstrates an ability to appropriately prioritize own work and meet deadlines.</p>	<p>Demonstrates an advanced ability to plan and manage complex SPRWS projects or programs including research, design, contract administration, inspection, approval, and coordination of construction activities.</p> <p>Demonstrates an advanced ability to meet deadlines, define, measure, and evaluate results, and prioritize and set deadlines for own work and other's work.</p> <p>Demonstrates an ability to supervise the work of lower-level engineers and technicians in the preparation of designs, plans, specifications, and cost estimates of a variety of water projects and improvements to the water utility system.</p> <p>Demonstrates an ability to coordinate budget materials and resources and an ability to identify and estimate future equipment and staff needs.</p> <p>Demonstrates an ability to monitor and manage unit projects and develop factors for measuring project success in assigned area of responsibility.</p>	<p>Demonstrates on a divisional basis an ability to expertly plan, manage, and simultaneously coordinate the different aspects of multiple public works projects or programs including design, contract administration, inspection, approval, and evaluation.</p> <p>Demonstrates an expert ability to monitor and manage unit projects, develop factors for measuring project success in assigned area of responsibility, keep projects within negotiated deadlines, and evaluate the project results.</p> <p>Demonstrates an expert ability to supervise the work of lower-level engineers and technicians in the preparation of designs, plans, specifications, and cost estimates of a variety of water projects and improvements to the water utility system.</p> <p>Demonstrates an ability to assist higher-level engineers or a division manager in the planning and implementation of water utility improvement projects.</p> <p>Demonstrates an ability to develop, implement, and administer budgets to include budget presentations.</p> <p>Demonstrates an ability to analyze information and to assist in the preparation of short and long range operational and capital improvement plans.</p>

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<b>Communication</b>	<p>Demonstrates an ability to effectively listen, speak, write, and interact with diverse groups of people and/or within a work group.</p> <p>Demonstrates an ability to follow verbal and written instructions.</p> <p>Demonstrates an ability to communicate and interact with the direct supervisor and coworkers on a daily basis or as needed, and to consistently follow complex instructions from the supervisor or management staff.</p> <p>Demonstrates an ability to produce timely, accurate, and easily understood reports and correspondence to ensure proper communication with staff associates, management, and customers.</p>	<p>Demonstrates an ability to effectively listen, speak, write, and interact with diverse groups of people and/or within a work group.</p> <p>Demonstrates a verbal and written ability to respond to citizen complaints and requests for information.</p> <p>Demonstrates an ability to follow complex oral and written instructions.</p> <p>Demonstrates an ability to produce written and supporting visual material and reports that are easily understood by the intended audience/reader.</p>	<p>Demonstrates an advanced ability to listen, speak, write, and interact with a diverse group of people including other divisions, city departments, utilities, contractors, consultants, and the community.</p> <p>Demonstrates an ability to complete engineering and project feasibility studies of proposed engineering projects and prepare technical reports, recommendations, and other correspondence that can be easily understood by the reader.</p> <p>Demonstrates an ability to prepare and administer contracts and agreements including monitoring the bidding procedure, meeting with contractors, and overseeing administrative procedures prior to construction.</p> <p>Demonstrates an ability to represent the department at meetings with other utilities or agencies to ensure that the interests of the Water Utility are properly represented.</p>	<p>Demonstrates an expert ability to listen, speak, write, and interact with a diverse group of people including other divisions, city departments, utilities, contractors, consultants, the community, public, legislators and other government officials.</p> <p>Demonstrates an expert ability to complete engineering and project feasibility studies of proposed engineering projects and prepare technical reports, recommendations, and other correspondence that can be easily understood by the reader.</p> <p>Demonstrates an expert ability to prepare and administer contracts and agreements including monitoring the bidding procedure, meeting with contractors, and overseeing administrative procedures prior to construction.</p> <p>Demonstrates an ability to speak and write in a persuasive manner that can be understood by diverse groups both within and outside the City including elected officials.</p>

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<b>Teamwork, Leadership, and Management</b>	<p>Demonstrates effective membership in a departmental work group by being self-directed, accepting new and challenging assignments, completing assignments, and meeting deadlines.</p> <p>Demonstrates an ability to lead a group of entry-level technicians.</p> <p>Demonstrates an ability to be an effective team member by accepting assignments willingly, and completing assignments within agreed upon time lines.</p> <p>Demonstrates an ability to assist in creating and maintaining a positive working environment.</p>	<p>Demonstrates effective departmental work-group leadership by encouraging individual participation and creativity. Demonstrates supportiveness of others and the group decision-making process. Demonstrates an ability to effectively manage conflict.</p> <p>Demonstrates an ability to lead a group of entry-level technicians by encouraging individual participation.</p> <p>Demonstrates an advanced ability to be an effective team member by being self motivated, accepting assignments willingly, completing assignments within agreed upon time lines, and assisting coworkers.</p> <p>Demonstrates an ability to create and maintain a positive working environment by sharing expertise with team members, fostering safe work practices, and developing a trusting work relationship with and among team members.</p>	<p>Demonstrates effective leadership of intra- and interdepartmental work groups by positively influencing employees and the work environment. Demonstrates an ability to be considerate, tactful, supportive and impartial.</p> <p>Demonstrates an advanced ability to effectively manage conflict. Demonstrates an ability to coach employees, manage their performance and development, and be creative in problem solving.</p> <p>Demonstrates an ability to supervise and provide leadership in the coordination of water utility construction projects including obtaining required permits, overseeing pre-construction administrative procedures, inspecting construction work for compliance with plans and specifications, and approving payment to contractors.</p>	<p>Demonstrates highly effective leadership of supervisors and employees by supporting the mission and vision of the organization, recognizing and defining issues, and moving issues forward within an interjurisdictional environment.</p> <p>Demonstrates an ability to facilitate the group problem solving process. Demonstrates an ability to direct others in promoting desired behaviors inside and outside the organization.</p> <p>Demonstrates an expert ability to effectively manage conflict. Demonstrates an expert ability to assist, plan, organize and delegate work, coach employees, manage their performance and development, and be creative in problem solving.</p> <p>Demonstrates an expert ability to provide leadership in the coordination of water utility construction projects including assigning and supervising the preparation of plans, specifications, and inspection of contract work to verify it's in accordance with plans and specifications.</p>

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<b>Customer Service</b>	<p>Demonstrates an ability to gain an understanding of SPPRWS’ mission and vision and the associated customer service standards.</p> <p>Demonstrates an ability to assist in identifying customer needs and effectively respond to those needs.</p> <p>Demonstrates an ability and commitment to continuously improve customer service by being attentive to the customer and listening to their concerns.</p>	<p>Demonstrates an understanding of SPPRWS’ mission, vision and associated customer service standards and an ability to apply those in day-to-day customer service interaction.</p> <p>Demonstrates an advanced ability to assist in identifying customer needs of a diverse group of internal and external customers and effectively respond to those needs.</p> <p>Demonstrates an ability and commitment to continuously improve customer service by being patient, attentive, and respectful.</p> <p>Demonstrates an ability to promote effective customer service through example. Demonstrates an ability to coordinate customer service efforts.</p> <p>Demonstrates an ability to apply knowledge of the system to quickly address customer concerns, respond to customer service issues, and an ability to know when to refer a customer service issue to a higher-level employee.</p>	<p>Demonstrates an in-depth understanding of SPPRWS’ mission, vision and associated customer service standards by consistently working in accordance with those established standards and by encouraging and coaching coworkers to meet or exceed the standards.</p> <p>Demonstrates a commitment to customer service by proactively addressing customer service issues and exhibiting patience, attentiveness, and respectful behavior when addressing complex customer service issues.</p> <p>Demonstrates an advanced ability to develop customer service standards.</p> <p>Demonstrates an advanced ability and commitment to continuously improve customer service.</p> <p>Demonstrates an advanced ability to promote effective customer service through example. Demonstrates an ability to coordinate customer service efforts.</p>	<p>Demonstrates an expert understanding of SPPRWS’ mission, vision and associated customer service standards and an ability to apply the understanding by consistently working to provide a positive example, by suggesting improvements to the standards, and by encouraging staff to meet and exceed the standards.</p> <p>Demonstrates an ability to promptly and appropriately respond to the most difficult requests for service from internal and external customers by resolving those issues as they arise and quickly respond to situations referred by less knowledgeable staff members.</p> <p>Demonstrates an ability to direct others in conducting customer service needs analysis in a functional area and develop customer service standards.</p> <p>Demonstrates an expert ability and commitment to continuously improve customer service.</p> <p>Demonstrates an ability to present a professional public image for the Water utility and the City.</p>

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Requirements				
Education, Certificates, and Registrations	Civil Engineer I – SPRWS	Civil Engineer II – SPRWS	Civil Engineer III – SPRWS	Civil Engineer IV – SPRWS
	<p>A Bachelor’s Degree in Civil Engineering from a university or college accredited by the Accreditation Board of Engineering and Technology (ABET). No substitution for education.</p> <p>Must possess a valid Minnesota Class D Driver's License, or equivalent out-of-state driver's license. The driver's license must have no suspensions or revocations for driving-related offenses within the two (2) year period prior to the date of appointment. Suspensions for parking-related offenses are excluded.</p>	<p>A Bachelor’s Degree in Civil Engineering and two (2) years of Civil Engineer I - SPRWS experience or Water Utility Technician III or equivalent. OR, a Master’s Degree in Civil Engineering with an emphasis in environmental engineering. Must have an Engineer in Training (EIT) certification. No substitution for education.</p> <p>Must possess a valid Minnesota Class D Driver's License, or equivalent out-of-state driver's license. The driver's license must have no suspensions or revocations for driving-related offenses within the two (2) year period prior to the date of appointment. Suspensions for parking-related offenses are excluded.</p>	<p>A Bachelor’s Degree in Civil Engineering and four (4) years of professional experience in civil engineering, at least two (2) years of which must have been as a Civil Engineer II- SPRWS or equivalent. Must be registered as a Professional Engineer in the State of Minnesota. No substitution for education.</p> <p>Must possess a valid Minnesota Class D Driver's License, or equivalent out-of-state driver's license. The driver's license must have no suspensions or revocations for driving-related offenses within the two (2) year period prior to the date of appointment. Suspensions for parking-related offenses are excluded.</p>	<p>A Bachelor’s Degree in Civil Engineering and eight (8) years of professional experience in civil engineering, at least two (2) years of which must have been as a Civil Engineer III- SPRWS or equivalent. Must be registered as a Professional Engineer in the State of Minnesota. No substitution for education.</p> <p>Must possess a valid Minnesota Class D Driver's License, or equivalent out-of-state driver's license. The driver's license must have no suspensions or revocations for driving-related offenses within the two (2) year period prior to the date of appointment. Suspensions for parking-related offenses are excluded.</p>

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